

THE
PSYCHOLOGICAL BULLETIN

PSYCHOLOGICAL PROGRESS.

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'To take stock of our progress'—a characteristic phrase of the late great writer, Herbert Spencer—may be the foreword of this department of the REVIEW as it is entering upon its second series of issues. No more interesting opportunity or more imperative obligation can be presented to any field of active scholarship than that of reviewing its modes of doing business and of estimating the net results of all the efforts put forth in its behalf. Nay, more; this is one of the highest duties which is placed upon every higher form of life. Particularly in the domain of science, readjustment, as demanded by any given situation, is the *sine qua non* of progress. Progress may thus come to be actually a direct advance, a tangential detour, or even a definite retreat. Effective readjustment in the interest of what ought to be can be made only in the light of what has been. Prevision requires revision; and revision requires retrospection. That progress may be safe and reasonably rapid, 'stock-taking' should be made with some degree of regularity and at intervals of sufficient magnitude to encompass a definite view.

Psychological progress in the history of science presents interesting permutations of facts and conceptions in so far as they can be related in the method of approaching consciousness as an object of study. The results of these permutations stand out definitely in the tenets of the great schools of psychology

which have arisen in the course of modern intellectual history. The views of an individual, or of an age, even, are largely to be understood as the resulting variants derived from the relative introduction of, and the changing emphasis upon, fact, method, and interpreting conception. The object of all psychology can be only one thing, namely, to present knowledge of mind, in its various manifestations. It is sufficient for our present purpose to take note of the fact that one heritage of the twentieth century consists in the great types of psychology which emerged during the past two centuries. The definiteness of what men have wrought in the past is completely evidenced by the historical necessity which compels us now to speak of 'schools' of, rather than individual views in, psychology. The trite distinction between 'the old' and 'the new' smacks rather of dilettantism, and represents the least degree of appreciation for the multitudinous labors which have brought forth such knowledge of mind as the race now possesses. The point we wish to insist upon is the integrity of psychology during all the variations in its more recent historic developments. Take down any of the important and more conspicuous handbooks and treatises on psychology which have appeared in English alone during the past fourteen years; examine their indexes, and the frequency of reference to the names and views of the great contributors to the gradual modern emancipation of the science strikes one as a forceful argument for believing in the constructive integration which has been, and is, taking place. So much, at least, must be admitted by him who is looking for traces of progress.

Six 'schools' of psychology stand out with historic distinctness, each in possession of characteristic achievements. To name them as is usually done is an easy matter; the faculty (or 'orthodox'), the associational, the Herbartian, the physiological, the experimental, and the genetic schools. It is vastly more difficult to secure for them names in terms of definitive adjectives. The first, second and fourth are terms which indicate the characteristic mode of explaining psychological phenomena, so far as observed. The third takes the name of its author; while the fifth and sixth refer chiefly to the method of

investigation, or the arrangement of explanatory material. It would be too much for one to attempt to maintain that these 'schools' arranged somewhat after the order of their historical appearance, succeeded each other in that logical sequence which is absolutely necessary for progress. Some of these dominant conceptions which have shaped our psychologies doubtless reflect the *Zeitgeist* which gave them birth; others may have been intellectual accidents appearing in persevering labor.

Merely to have named these schools is, for the average student, sufficient to characterize them. Our main point, however, is to point to the secret of progress which lies in their sequence. Certainly the first three (and possibly the first four), schools are now historic; and we are living at a time when the last two comprise the distinctive work of psychologists. But there was a time when most men were taught, and taught in turn, the faculty view of mind; when many men could be best characterized by being called 'associationists,' or 'Herbartians,' etc. Now, however, psychology has ceased to employ a single principle of explanation, such as 'association,' but it uniformly recognizes the various facts of mental combination, and assigns association its limited, but due, place in its whole exposition. So it is with the other universalized views. The representative good in each is accepted after its validity has stood the test of criticism, and it becomes a bit of constructive material for the psychology that is to be. The ultimate fusion of these many counter-currents, however, does not result in making the science of mind a *pot pourri*. And at times it may require an unusual amount of optimistic faith to believe that the fierce rivalry between psychological principles will ever fade away, leaving an harmonious kingdom of specialized truth. For purposes of record, we proceed to note a vigorous movement in the history of recent psychology, which, taken in all its bearings, serves well as an illustration of the points just emphasized.

The death of Herbert Spencer on December 8, 1903, at the age of eighty-three years brought to a close one of the most important movements in modern psychology. Just fifty years before he published the protocol of the philosophical foundations

of his system of psychology, an article, 'The Universal Postulate,' in the *Westminster Review* for October, 1853. (The same discussion, much elaborated, appears in the main work.¹) The first edition of *The Principles of Psychology* appeared in 1855. A second edition of the same, greatly augmented and notably altered in arrangement was prepared in 1870. The pointed and varied criticisms made upon his theory led to the third edition of 1880, which varied from its predecessor mainly by the addition of 'Part VIII., Congruities,' in which the author attempted to buttress his conclusions by bringing " 'the several lines of argument to a focus:' believing that 'the harmony that may be shown to subsist between the doctrines elaborated in the respective divisions, is a strong confirmation of their truth.'"² Such is the brief constructive history of one of the remarkable literary products of psychology during the nineteenth century. So far as our knowledge extends, no 'text-book' edition of this work was ever prepared. It made its appeal to nature, rather than to the student intellect of the age in which it has lived. It became and remained one of the dominant forces in shaping psychological theory, often negatively—for we contend that reactionary opinion is often as potent as positive contribution.

What the movement stood for is best indicated by the fact that the clearest exposition of the culture of the last half century is that system of thought in which this psychology found itself. (This need not say an iota approvingly of that philosophy, but it may imply somewhat respecting the anti-philosophical tendency of that culture.) Viewed from the completion of the 'synthetic philosophy' constructed by its author, *The Principles of Psychology* literally occupies a central position in that system. The metaphysical and biological preliminaries and principles precede, and the sociological and ethical interpretations and applications follow the theory of mind. It might require some stretch of exposition to maintain that his philosophy is psychological. The work appeared at a time when a theory of evolutions, which had hardly become more than an

¹*The Principles of Psychology*, authorized edition, Appleton, N. Y., 1897, Vol. II., pp. 406-427.

²*Ibid.*, Vol. I., p. iii.

academic affair, was being seriously considered with reference to its applicability to the higher order of natural phenomena, to which it has in the meantime been more and more successfully applied. This is not the place in which to question the claim to priority in time, made by the system, nor to detail any derivative relations it may bear to forms of evolutionary theories which had been developed in earlier thought. The most important facts for record are these: psychology was developed by Spencer, not for its own sake, but as a means of exploiting the evolutionary hypothesis held by him; and, also, it was made a handmaid of the philosophy which was to grow up as a result of the method. He applied a theory, rather than studied mental facts empirically. The gain to psychology lay chiefly in the free reconstruction of available facts with reference to principles which were made to do an equal amount of service in all the sciences.

Somehow Spencer gave a definite impulse to 'scientific' psychology. This came largely as a negative result of his thinking, being practically the last of those barons who energetically insisted upon the systematic aspect of psychology. His theory of 'transfigured realism,' oddly enough, is probably to be credited with this result. The negations of the materialists — or the realists — did not appeal to him; nor could he find himself ready to accept the psychology of the idealists. What he could accept from each of these theories was incorporated into his philosophically agnostic compromise. In spite of the attempt to apply continuously the laws of biological evolution to mental processes, he himself could not help recognizing the differences between life and consciousness. This in part is revealed by his recurrent return to the corner-stone of his thinking, 'the dictum of consciousness.'

His definition of psychology, in its more restricted meaning, should not be forgotten. No other modern writer has probably so clearly prepared the way for psychology's emancipation. " * * * Under its subjective aspect, psychology is a totally unique science, independent of, and antithetically opposed to, all other sciences whatever. The thoughts and feelings which constitute a consciousness, and are absolutely inaccessible to

any but the possessor of that consciousness, form an existence that has no place among the existences with which the rest of the sciences deal."¹ To this subjective science there is added the complement of an 'objective' psychology, which treats of the neural basis of consciousness. While attempting to give the science such distinctness, which was only one of the historic forces *sublimating* psychology out of the secondary position it occupied fifty years ago, the wonder is that Spencer could turn around and submerge his own work in the larger metaphysical whole.

In method, the Spencerian movement wonderfully seconded the demand made by Herbart that the individual method in psychology needed a definite supplement. The one went to metaphysics and mathematics, the other to metaphysics and biology; while both made characteristic appeals to experience. Spencer's method in psychology is complicated by his stupendous attempt to apply the same mode of derivation to matter, the cosmos, organic forms, individual consciousness, and to social groups of all orders. Mind is conceived of as thoroughly at home in the physical and organic universe, and, indeed, is a definite part thereof. In short, we have an evolutionary psychology. Consciousness has a cosmic genesis, and its various forms, in developing, parallel those of living organisms.

'The data' of psychology (chiefly in its objective aspect) are supplied by biology through its knowledge of nerve structures and function. The starting point for synthetic psychologizing is the reflex arc *and* a centripetal fibre. The prime duty of psychology is to determine the definite relations between the two series of physical and mental phenomena. Mind, 'as introspectively analyzed,' consists of 'feelings and relations between feelings.' Between nerves and consciousness there exists a parallelism, which while not capable of 'immediate proof,' is the hypothesis that 'harmonizes all the observed facts.' The evolution of mind is the progressive 'adjustments of internal relations to external relations' — the quality which distinguishes the truths of psychology from those of physiology.²

¹ *Ibid.*, Vol. I., p. 140.

² *Ibid.*, Vol. I., p. 391.

Man is a psycho-physical organism, whose history is written in modes of adaptation to environment. Biology thus reaches up into psychology — for life itself is harmony between the outer and the inner worlds.

The Principles of Psychology is made up of a number of parts, in each of which a somewhat different mode of approach is selected, and somewhat different problems of consciousness are treated. These parts fall into two chief groups, viz: 'Synthesis' and 'Analysis.' In the former he studies intelligence as a part of life, but chiefly with respect to the correspondences it constructs in terms of space, time, speciality, generality, complexity, etc.¹ In the latter he traces the organization of modes of consciousness, beginning with reflex action, such as instinct, memory, intelligence, feeling and will — or the progressive correspondences which occur when 'intelligence' appears upon the evolving scene. The process of evolution here is that of definite and successive experiences, which are consolidated by association and habit, usually so-called, but known to him as 'the law of intelligence.'² This progressive association is fed by the constructive streams which issue from the definite functions inherent in the nervous system; for, all mental functions spring from reflex action. All the specialized functions, popularly known as faculties, are simply modes of *organization* of consciousness. This idea of mental organization was probably a purely biological analogy in Spencer's hands; but through his influence it has become a working conception of to-day, stripped of its analogical encumbrances. Also, the progressive, rather than the static, unity of consciousness finds peculiar support in his theory. The most characteristic contention in the part of his theory which deals with 'special analysis' is the claim 'that not only the *form* of thought, but the *process* of thought, is the same throughout.'³

Any degree of plausibility inherent in this evolutionary psychology is vitiated by the limited scope given to it by its author. Its formulæ were applied almost altogether to the intellectual aspects of mind. Spencer remained truly English in accepting

¹ *Ibid.*, Vol. I., p. 385.

² *Ibid.*, Vol. I., pp. 407, 577.

³ *Ibid.*, Vol. II., p. 298.

the intellectualistic view of consciousness. His theory of will, for example, well represents this. Will is only a transformed presentation. The process of psychical evolution is completely traced in will, to which each of all lower modes of consciousness make some contributions, and which he defines as a 'mental representation of the act, followed by the performance of it,'¹ and there is nothing beyond this in it. This view is not merely historic, for it has received marked expositions, in modified form and with a different background, in the writings of at least two very influential American psychologists during the last thirteen years. Another marked imperfection in Spencer's theory is the omission of tracing the complete evolution of the emotions. This seems to have been a matter of convenience for the theory rather than a desire to make the psychology truly representative of the mode of life it was attempting to depict.

The outcome of Spencer's analyses was arrival at that 'doctrine of Transfigured Realism—the last step in that general process by which mind is made a differentiated and integrated division of the totality of being.' Every consciousness is an individualized part of the Universal Power.² This leads on to the philosophical interest in the relation of subject and object, and this psychology of evolution loses itself in the penumbra from which it emerged. It is impossible at this time to make a tabular exhibit of specific influences emanating from this strained and partial theory of mind. The movement is closed; but the spirit of its motif lives stronger than ever in the genetic method and conception to which it gave such a wide preparation.

As a matter of record, we note the appearance during 1903 of the English translation of Villa's *Contemporary Psychology*, by Manacorda (London: Sonnenschein).³ It is a valuable work, which in its critical exposition of all modern psychology, indicates most clearly the net results of the psychological progress, of which a few conditions have been noted in the foregoing foreword.

¹ *Ibid.*, Vol. I., p. 497.

² *Ibid.*, Vol. II., p. 505, vv.

³ It is to be fully reviewed in the BULLETIN.

PSYCHOLOGICAL LITERATURE.

The Origin and Significance of Hegel's Logic. A General Introduction to Hegel's System. J. B. BAILLIE. New York and London, Macmillan & Co. Pp. xviii + 375.

A well-known German professor of philosophy who could himself, on occasion, match any in vituperation of Hegel, once, in a moment of penitence, remarked in my hearing: "After all, it ill becomes us who stand upon Hegel's shoulders, as undoubtedly we all do, to spend our time spitting on the old man's head." Among English and American philosophers consciousness of indebtedness to Hegel has been far more generally and more generously recognized; and as here, even when most discredited, he has usually been respectfully bowed out, and not brutally served, we can make the admission without any compunction of conscience over our bad manners. Yet, in spite of this general conviction of indebtedness to Hegel, practically no one nowadays accepts his system in its entirety, and even the most careful students of his works bring back divergent reports as to his permanently important philosophical achievement, almost the only point of complete agreement being the conviction of each interpreter that Hegel has profoundly influenced *him*, and our age generally. It ought to be of material help in gaining a definite appreciation of Hegel's contribution to philosophy to get clearly before us the historical Hegel. The *Logic* is admittedly the very heart of his philosophy. Dr. Baillie in the work before us would bring out the precise significance of the *Logic* by exhibiting its historical evolution, by showing how it grew up in its author's mind in the course of his philosophical development.

Dr. Baillie expresses the hope that in this way he may succeed in removing the 'initial difficulties' in the way of understanding Hegel, and make it possible to enter the system by way of the *Logic*; and thus the secondary title of the book would be justified. In this we feel the author has hardly been successful. A student 'introduced' to the system through this work would, we fear, not be much inclined to pursue the acquaintance. The development is not traced with sufficient emphasis of salient features, the discussion is frequently diffuse, and the book is not without digressions which, interesting and important as they are in themselves, would prove rather distracting to one seeking entrance to the system.

Dr. Baillie finds the general point of view the same in the earlier as in the later system. Hegel has from the first a strong appreciation of the contrariety among facts, is bent upon interpreting the universe from the standpoint of supreme reality, regards reality from the point of view of the Absolute, and views the Absolute as Spirit (pp. 25-27, 61). This fundamental position is established by no proof whatever. Hegel is led to assume it by his 'deepened appreciation of the nature of the religious and ethical consciousness,' (which gives us the '*Leitmotiv* of his mental history') and he is further influenced by the protestant principle of the worth of the judgment of the free spirit of every man, and by the general trend of modern philosophy with its strong individualism, its conception of the freedom of spirit.

In the first of the three periods which Dr. Baillie distinguishes, (1797-1800) Hegel has not discovered any 'definite method of attaining system,' the idea of 'development' has not dawned upon him, 'dialectic' is not yet a technical term, and the idea of 'reflexion' is most confused (pp. 54-56). 'The real is divided in the usual way into the Self, the World and God.' (Yet we read further down on the same page that for Hegel at this time 'reality is thinking beings' (p. 51). His idealism is 'uncritical' and 'monadistic.' Accordingly he distinguishes emphatically, (a) between Logic and Metaphysics, (b) between our knowledge of Absolute Spirit and the knowledge which that Spirit has of itself, and (c) between the ideal presentation of the real and the real itself. His development in the later periods is simply the story of his overcoming of these distinctions through the discovery of the full significance of the supremacy of mind.

The second period (1801-7) is one of 'criticism'; Hegel is 'becoming conscious of his philosophical position and master of his terms' (p. 58). Speculative science must start from the Absolute. This is now for Hegel axiomatic. It is not a postulate, nor a matter of faith. Rather, it is present in every proof, real throughout and from the first in all philosophy, and in common sense. 'Philosophy is just a laying bare of the content of the Absolute,' and this Absolute is absolute identity (p. 68.) But consciousness has ceased to be aware of itself as only-in and for the totality, and has 'fixed' itself as separate from it, and thereby also split the Absolute into fundamental but finite opposites reciprocally limiting each other. This is, we are told, the *terra firma* of Hegel's entrance into philosophy, and 'the groundwork of the mature philosophical convictions to which he now began to give utterance' (p. 70). Understanding isolates aspects of reality and regards them as independent and self-sufficient.

Philosophy, which is the pure activity of reason, would reestablish the totality of knowledge by exhibiting these aspects as constituting an organic unity, each part of which contains the whole (p. 80). In doing so it must, however, discover the objective self-connection of the content itself, and not impose a plan of connection from without. Hegel at this time agrees with Schelling in holding the absolute identity as the 'indifference point' of subject and object, and in recognizing 'the immediate continuity of the contents of the opposed sciences of the Absolute.' But, for Schelling, these sciences are different ways of stating the objective unity of subject and object, construed on a different basis in each case, in the one case from the object, in the other from the subject. For Hegel, however, mind is not merely mind, but must carry with it the 'self-construction of nature,' and *vice versa*. In working out this view by the developmental method Hegel discovers that these opposed elements are not on the same level, but that mind is higher than nature, and then he returns to his earlier view of the supreme importance of Spirit, which when under the influence of Schelling, he had allowed to fall into the background. And the current of his subsequent thinking is determined by the readoption of Spirit as the fundamental principle. Henceforth he will seek to demonstrate that the Absolute is mind (p. 120).

In the second period Hegel holds that the finite has significance for the Absolute only when and in so far as it is negated (p. 125). Yet these finite elements actually exist, and, therefore, the 'completeness of the knowledge of the Absolute ought somehow to find a place for these finite realities, which would at once do justice to their reality while ceasing to take them as merely finite' (p. 128). The difficulty in which Hegel finds himself at this juncture is partly explained in the fact that he is at this time attempting to make the positive and negative forms of knowledge (*transcendental Anschauung* and *Reflexion*) each do its work independently. In the third period (1807-1816) these are no longer regarded as different and contrasted functions of the mind, but are 'fused into a single process without losing their essential nature (the expression respectively of the positive and negative content and process of reason), yet without preserving their individual distinctness' (p. 155). The process of negating is that of positing, and this by one and the same act of reason. To make this good Hegel must show the supremacy of mind throughout all reality. And, accordingly, in the *Phenomenology* he undertakes to give a systematic proof of the standpoint of Absolute Idealism, and it was 'mainly for this purpose that that work was written' (pp. 140, 153). The *Logic*

'presupposes' the results of this inquiry (pp. 210 ff). But the *Phenomenology* merely gives the modes of experience which the mind possesses, taken simply as existent facts in experience, and criticised and systematized (p. 209). True, it discovers that the one essential reality in all experience is the unity of subject and object, and that the modes of experience are the modes of this unity. But these latter have not been exhibited in the *Phenomenology* in their genesis and in their systematic interconnectedness. These modes of unity *qua* unity must now be taken, stripped of all direct reference to the diversity of experience, and connected in a form determined by their own character. This is the task of the *Logic*, the achievement of which constitutes the central work of the third period. Here the dialectic is exhibited in its ultimate form, since it is operating with a content 'simple and pure' (cf. pp. 156-157). And inasmuch as the notions with which *Logic* deals are not 'mere thoughts,' but are as the *Phenomenology* has shown, the essence of experience as well as of reason, *Logic* deals with ultimate reality and is one with metaphysics (pp. 237-240). The changes which the *Logic* undergoes during this period our author holds to be significant merely as showing that that work is not to be taken as a finished body of truth the validity of which as a whole must stand or fall with every part.

The method in the *Logic*, as in the *Phenomenology*, is 'simply the inner activity of the mind itself.' The same mind 'seeks to express itself in its entirety, and at the same time in a special form.' The process of knowledge thus has its impulse in a felt contradiction, in the contrast between the fullness of the completed life of mind and the insufficiency of any one special mode of it. In passing on to the new and larger experience mind for the first time becomes fully aware of what was implied in the preceding. And so the contrast between the more adequate and the less adequate experience or notion is simply the contrast between mind more completely and less completely expressed (pp. 259-269).

Dr. Baillie tells us in his preface that his method of interpretation will be 'sympathetic,' and he keeps his promise admirably — until he reaches his concluding chapter entitled 'Criticism.' Then the atmosphere changes. The long-pent-up rebellion breaks out, and it looks, at first, as if Hegel's carefully built structures were to be completely demolished. Most of the criticisms offered seem to us, and we speak not as in any sense a partisan of the system, as curiously perverse and impertinent as any that the most 'unsympathetic' critic could devise. Hegel was wrong, we are told, in maintaining that

Logic can give us the content of Absolute Mind, since it deals with the 'pure' universal content of mind, which is but a single aspect of experience (p. 336). He was wrong in identifying knowledge with reality. It was inevitable, Dr. Baillie adds, 'that a scientific inquiry which sought to find out the highest form of experience, should find that form in the Notion of Science itself,' for throughout one has been seeking 'just *the idea of that type of experience (namely, knowledge) which was constructing the whole of experience*' (pp. 340-342; italics the author's). (Does not this statement, if it means anything, lead straight to agnosticism?) Further, we are told, Hegel's attempt to transcend by knowledge the finite consciousness of the knower is altogether futile (p. 344). (Much, we think, might be made of this criticism, but it is certainly not valid for the reason assigned, which is a pure quibble.) Again, the *Logic* has left reality behind. The Notions with which it deals are neither objective, in the sense of 'existent in fact,' nor concrete, nor real; are not adequate to the expression of the reality of nature, or of the self, or of things; nor are they self-constructed. They are but 'the *Fata Morgana* of a philosophical perspective.' (In this criticism our author seems to take the 'Notions' as the Platonists took 'Ideas,' in precisely that form of the theory of ideas that Aristotle demolished, and to be hardly fair to Hegel.) Once more, and worse still, the validity of the method that Hegel employs throughout depends on the validity of the standpoint of idealism; but he undertook to establish idealism by precisely that method. So Dr. Baillie finds here an 'obvious circle' in the reasoning, and concludes that Hegel has not succeeded in proving Absolute Idealism because the *Phenomenology*, in which he undertook to do so, is constructed by a method which presupposes the truth of idealism. Furthermore, the individual thinker is not eliminated, as Hegel supposed. The very principle of 'degrees of truth' rests upon the finitude of the human spirit. There are no degrees for the Absolute *per se*. (We should like to ask, why not? This contention would make the Absolute indeed the 'tomb of the finite.')

One is somewhat surprised after all this to read that 'the foregoing objections do not seriously damage the real value of Hegel's general position, or of the *Logic* in particular' (p. 363). But if, as our author holds, the *Logic* depends on the *Phenomenology* for its initial presupposition, if the inquiry there undertaken 'alone could give Hegel any new result of his own, as it alone could establish a final philosophical position' (p. 146), and if, as he further holds, the argument of that work is a pure *petitio principii*, this would seem

hard indeed to maintain. Yet, in spite of his strictures, Dr. Baillie thinks Hegel has shown that self-conscious life is 'the Ultimate Reality of Experience,' and as knowledge is found within this reality, knowledge is objective. For then the conditions 'by means of, and under the constraint of which knowledge is carried on, will necessarily be ratified by the whole, of which we as finite knowers are parts' (p. 365). (This would not, however, follow if we are merely 'finite knowers' and 'parts'.)

The simplest expression of Hegel's result is, according to Dr. Baillie that 'knowledge is the realisation of experience in the form of reflexion.' Taking the result in this light, he adds, 'we shall find that most of the objections urged against it above cease to hold.' (This is by no means obvious, and our author does not take the trouble to explain how such is the case. But, if this is so, one can only regret that this 'simple' and 'adequate' expression of Hegel's result was not first brought out, and the criticisms made in the light of it.)

Dr. Baillie has with much skill shown how the problem of the *Logic* is forced to the front in the very effort to solve the problem with which the *Phenomenology* dealt, and also the essential identity of method in these two works. But when he goes on to state the relation between these works in the asserted dependence of the *Logic* upon the *Phenomenology* for the establishment of its 'initial presupposition,' the statement is certainly misleading.

It was perhaps inevitable that in dealing with Hegel just three periods should be distinguished in his development, even though these should not exhibit a clear case of the Hegelian triadic forward movement. But the three periods which our author finds are not marked off with such precision as the general scheme of the book would imply. They do not mark definite steps in the development of Hegel's philosophy, still less in the evolution of the *Logic*, but rather just such a general division of time as might fit the life of almost any considerable thinker who lives to complete his life work. The first stage presents an abundance of the raw materials out of which philosophies are made, and reveals more or less definite philosophical tendencies; the second covers the entire period when the philosopher is whipping these materials into shape and coming into full possession of his own essential contribution, and it includes all the intermediate stages of growth and development up to the conclusion of the *Phenomenology* in which the principle is at last clearly brought to light; the third is given over to the more complete demonstration and elaboration of the principle. The difficulty in making these stages more clearly defined

is seen when our author undertakes to give a general characterization of any one of them, as, for instance, when he tells us that the second period is characterized by the purely negative treatment of the finite, which is certainly not accurate when one has in mind the results of the *Phenomenology*. And, in this connection, it is a significant fact that Dr. Baillie devotes a considerable portion of his discussion of the third stage to the *Phenomenology* (fifty-eight pages, or about one third of this division). Yet this work covers the larger part of the second stage—1803–1806–7, as Dr. Baillie himself gives the dates.

In spite, however, of the criticisms which we are forced to make, we do not wish to minimize the value of this work. It was certainly a happy thought to conceive of throwing light on the *Logic* by showing how it grew up in its author's mind, and Dr. Baillie has in the main been successful in carrying out his purpose, and has made an important contribution to the better understanding of the 'dark philosopher of Schwabia.'

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The Philosophy of Hobbes. FREDERICK J. E. WOODBRIDGE. Minneapolis, The H. W. Wilson Company. 1903. Pp. xxxvi + 391.

This volume contains Chapters I.–VI. of the *Elements of Philosophy*, Chapters I.–XVIII., XXXI., XLIII., of the *Leviathan*, and numerous passages collated from the *Human Nature*, the *Philosophical Rudiments*, the *Liberty and Necessity*, etc., which are printed as footnotes, or, in case of the longer extracts, inserted in the body of the text. Professor Woodbridge does not approve the common practice of lightening the labor of the student, and predetermining his conclusions, by providing him with an elaborate 'Introduction,' and an abundance of expository notes. The object of the supplementary selections is to render such help unnecessary by bringing together, as far as possible, all the materials necessary for the determining of Hobbes's thought. The selections have been made with care and skill, and are an acceptable substitute for the excess of explanatory and critical comment sometimes found in books of this kind.

It may be questioned, however, whether further aid than Professor Woodbridge supplies is not, after all, desirable. A writer so original and paradoxical as Hobbes, and so influential upon subsequent thinkers, cannot be interpreted solely from his own text; account must be taken of the intellectual environment in which he stands. For example, the contract theory of government has had a long history. Is

it to be considered a historical account of the origin of society, or a theoretical exhibition of the nature and grounds of civil order? Is the contract between the ruler and the subject, or between the individual subjects? How can it be binding upon those who have never given personal consent? The answers to such questions given by Hooker, Spinoza, Locke, Hume, Rousseau, Spencer, must have much interest for the student of Hobbes. The doctrine of sovereignty set forth so uncompromising in the *Leviathan* embodies legal conceptions, which, when duly considered, render less obnoxious such extravagances of absolutism as 'The sovereign is not subject to the civil laws,' 'the measure of good and evil actions is the civil law,' 'Nothing the sovereign representative can do to a subject, on what pretence soever, can properly be called injustice or injury.' It would be helpful to a novice to be referred to authorities who would instruct him how to interpret such maxims from a legal or political standpoint. Bentham's *Fragment on Liberty*, Austin's *Province of Jurisprudence*, Sir H. Maine's *Early Institutions*, Sir F. Pollock's *Science of Politics*, T. H. Green's *Lectures on the Principles of Political Obligation*. Such text-books of political theory might be advantageously drawn upon for elucidation and criticism.

Does Hobbes teach that morality is wholly subsequent to the establishment of civil society, that it is purely conventional and institutional, or does he recognize a morality of reason and conscience prior to, and conditional for the morality of social convention? This difficult question must be settled by a careful examination of the apparently conflicting statements found in Hobbes's writings, and most of the relevant passages are included in these selections. In view, however, of the widespread repugnance excited in his day by Hobbes's ethical views — a repugnance so intense that it has been well said that he 'created English moral philosophy by antagonism' — it is desirable that the attention of the student should be called to the interpretations and criticisms of Cudworth, Clarke, Price and Butler.

One is inclined to disagree with Professor Woodbridge's estimate of values when he tells us that he has omitted in the selections, 'the details of his mathematical, physical and political theories.' Surely Hobbes is, above all else, a political theorist. One would hardly reckon his traditional logic and his crude psychology more important than his speculations in the field of politics and ethics. The chapter on 'Method' is rightly included in the extracts; it is essential to a proper appreciation of Hobbes's genius. But the student might well be invited to compare the ideas respecting the nature, the scope, and the

method of philosophy, set forth in this passage and in Chapter IX. of the *Leviathan* with the corresponding and the contrasted ideas in the *Novum Organum* and the *Discourse on Method*.

This volume is a scholarly piece of work and will be of service to students and teachers of philosophy. But it would be still more useful if it were broadened in treatment, and enriched in content, in ways such as have been indicated. The book is indexed. Aubrey's *Life of Mr. Thomas Hobbes of Malmsburie* is prefixed to it.

EDWARD H. GRIFFIN.

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Outlines of Psychology; An Elementary Treatise with some Practical Applications. JOSIAH ROYCE. New York and London, Macmillan. 1903. Pp. xxvii + 392.

Professor Royce's excellent book will be valued by teachers for its lucid and helpful applications of psychological doctrine, while psychologists will be interested in it chiefly as an essay toward a system of psychology, in which we catch sight of things in the mass rather than in detail, the woods not being at all obscured by the trees. A real system of the science presented in so narrow a compass and with such clearness and precision is indeed rarely to be found.

In the opening chapters the author sets forth the conditions under which psychology is possible and the methods it employs. Emphasis is laid on physical and physiological connections, and introspection is regarded as merely an auxiliary to what are often called the 'objective' methods of research.

The general features of the conscious life are next described, and the unity of consciousness is made prominent, as against the view which regards it as a 'shower of shot.' Consciousness, the author holds, is not composed of 'elements.' When we analyze a state of mind into its elements, we really then and there bring these elements into existence; they have no existence until we analytically detect them. This doctrine of analysis has such important consequences not only for our conception of the mind, but for psychological method, that Mr. Royce's own words should be quoted: "The elements that analysis detects exist, as conscious states, when they are detected and not before. Not only is this true of the elements that can be isolated by careful experiment or by means of technical training. It holds also of those elements which we can either find or not in a given present conscious state, according as we do or do not choose to attend to them. As has been said, we always observe in any conscious state unity and

multiplicity. But the conscious state contains exactly such multiplicity as we do observe. *The multiplicity that we might observe, and do not observe, belongs to a possible mental state which, at the moment of our failure to observe, we do not possess*" (p. 109; the italics here and in the quotations following are the author's). In analyzing a state of mind, accordingly, we do not discover what is really in the state before our analysis; on the contrary, we *substitute* a brand-new state of mind; and it is only by a 'convenient fiction' that we can speak of the newly-noticed elements as existent previous to our observation of them. The author, it is true, speaks of a 'correspondence' between the new and the old state; but this 'correspondence' turns out to be merely that the two states occur under similar physical and physiological conditions. He seems to believe in no *internal* resemblance in the states themselves; whatever resemblance there is, is entirely in their physical setting.

It is difficult to reconcile the author's doctrine here with his view of the psychological methods, to which reference has already been made. If, as he tells us, introspection is, 'for the scientific psychologist, despite its importance, rather to be used as an auxiliary of the other methods than as a method capable of leading the way' (p. 17), it is surprising to be told so assuredly that a mental state has nothing more in it than its possessor happens to observe. Such a doctrine is certainly counter to the spirit of all 'objective' methods, and is not strongly supported even by introspection.

Nor is it necessary to go to such lengths in order to down the 'shot' doctrine of consciousness. The truth would be sufficiently hedged about if we regarded mental elements, not as self-contained and mutually indifferent objects, like shot, but as ultimate qualitative distinctions that are responsive to one another, and which therefore take on a somewhat different character according as they are in relative isolation or are in this or that particular setting. The total state, it should be added, is more than the *sum* of such elements. They are merely its materials, whereas the state has also *architectural* features. On the whole, it seems probable that analysis changes a state, not so much by putting in elements that were not there before, as Mr. Royce contends, but rather by *taking out* and destroying this architecture of the state. The 'elements' were there all the while; but before our analysis they were subordinate features of a general design; whereas after analysis they are *disjecta membra* and have a different look. As to whether they are, in all strictness, the same elements before and after such violence has been done them — this would give room for

subtle discussion without much fruit. The important point is, that the elements which are cut out by our analysis resemble something in the state before the analysis. The correspondence between analyzed and unanalyzed states is therefore direct, and not round-about through the physical accompaniments merely, as the author maintains. Analysis really tells us something about the unanalyzed states themselves and not about their physiological accompaniments only. If our author's doctrine of analysis were sound, it would mean an end to psychology so far as a knowledge of the constitution of naïve and unreflective states of mind is concerned. So far, then, as Mr. Royce's doctrine is advanced in order to make it warm for the mind-stuff theory, he is certainly adopting expensive means: he roasts the pig by setting fire to the house.

Professor Royce believes, however, that his own account is freed from 'the entanglements of the theory of mental elements' by substituting for the "fictitious mental 'elements' the *elementary cerebral functions*" (p. 208). Association by similarity—as where, to use his illustration, a tune reminds me of another which had a similar harmony or cadence—is explained as an association between similar cerebral elements and not between similar psychic elements direct. There may possibly be no entanglements in calling the neural process corresponding to the cadence or the harmony here an 'element.' But it may well be that such physiological 'elements' are no less fictitious than are their psychological counterparts. The physiological processes corresponding to the cadence or the harmony, are possibly not separate from the processes corresponding to the tones of the tunes. They are, perhaps, as inseparable and as little elementary as are the psychological cadences or harmonies which we say are similar. An association between the neural elements in such a case is as difficult to understand as is an association directly between the two psychological qualities, and no scientific gain is made by assuming that the real bond of connection lies exclusively on the physiological side.

A striking feature of the book is the adoption of a novel classification of mental processes under the terms sensitiveness, docility and initiative. This arrangement corresponds pretty closely to the biological grouping of organic characters into those due to the present environment, those due to past conditions, and those somewhat vaguely referred to as spontaneous or chance variations.

Under the heading sensitiveness, the author groups the direct responses to stimulation, such as sensations, feelings and (with more reserve) images. In the treatment of space, he makes much of the

'tropisms' described by Loeb. Royce feels that these tropisms provide the basis for a primitive experience of orientation, and that particular spatial experiences are but differentiations of this. As regards feeling, Mr. Royce goes with Wundt to the extent of rejecting the notion that feelings differ merely with respect to pleasure and pain. But instead of adopting Wundt's farther 'dimensions,' namely, 'excitation-depression' and 'tension-relief,' Mr. Royce substitutes for these the single contrast of 'restlessness-quietness.'

Under docility are considered all those processes which give evidence of the effect of past actions — perception, memory, discrimination, social imitation and opposition, conception, reasoning. Association is an important aspect here; and association, even in the form of association by similarity, as has already been pointed out, is mainly a matter of neural habit. In treating of perception, conception and discrimination, as indeed throughout the volume, prominence is given to our motor reactions. Even Weber's law is regarded by the author not as relating directly to our sensations, but as a law of motor reaction. According to Professor Royce, I feel the sensations *A* and *B* to be different in case "I respond to *A* in a way different from the way in which I respond to *B*. If I cannot perform the act, I cannot make the conscious discrimination" (p. 271). We are thus given a theory of sensory discrimination analogous to the James-Lange theory of emotion. As in the one case the emotion is due to the physical response, so in the other our conscious discrimination is thought to be due to a difference in this response. While it is easy to agree with Mr. Royce in interpreting Weber's law as a law of discrimination and not as a law of sensation merely, objections at once occur to the farther step of making the discrimination in this case a matter of reaction. For we still have to explain the fact that we discriminate certain differences in our reactions, and not others. A difference of reaction is not, of itself, sufficient to account for our conscious discrimination. For probably to no two stimuli do we ever make two exactly similar reactions. The reactions must be enough different for us to *feel them to be* different; and we are practically where we were when we began. The discrimination of light sensations, for example, may be *aided* by differences in the accompanying motor processes, but its law is not thereby reduced to a law of our motor functions.

The social aspect of docility is set forth with force and persuasiveness, as might be expected from one who has contributed so valuably to this side of psychology. Over against social imitation there is set up the fact of social opposition. "The preservation of a happy

balance between the imitative functions and those that emphasize social contrasts and oppositions forms the basis for every higher type of mental activity" (p. 279). And in regard to the importance of social life generally for our intellectual growth, he holds that 'all the special processes of thinking, such as those usually discriminated as conception, judgment and reasoning, * * * result from the effects of social stimulations' (p. 285). And again, "the whole method of the reasoning process has come to the consciousness of men as the result of disputation. * * * If the process of conception is the formation of a plan of conduct, the process of reasoning results from trying so to portray this plan as to persuade other men to assume it" (pp. 295-296). Professor Royce assists us to appreciate the influence of social stimulation; yet one cannot but feel that it would be difficult to defend him from the charge of over-statement in such passages as these. There is no sufficient warrant for giving so exclusive importance to the social environment, at least for the lower stages of the intellectual life. If, as the author says, "we bring out the essence of the reasoning process when, in an appeal to a careless child who has done some mischief, we say 'See what you have done,'" then it is probable that non-social situations often work toward the same end.

By initiative Professor Royce does not mean will. He has in mind a large group of adjustments, many of which are involuntary, many of which are purely intellectual, that occur when our habits are broken up or modified, and a real advance is made toward a more perfect adjustment to our environment. Such breaks with the past are, as with Professor Baldwin, closely connected with the 'try, try, again' reactions; but Professor Royce attributes less importance to pleasure and pain as the main-spring of such acts, and emphasizes the other 'dimension' of feeling, namely its side of restlessness. The author is careful to warn us that by initiative he does not mean any actual origination in a free-will sense; he does not mean that anything mental occurs without ample antecedents. He would mark by the term initiative simply those variations that have an outer appearance of origination, where the readjustment can be attributed neither to the present stimulation nor to the past habits or heredity of the organism. Professor Royce's classification as a whole is attractive, and while the old tripartite division may be able to hold its own against his, yet the new grouping is a welcome addition to our ways of arranging the special processes of the mind.

The volume certainly commands one's admiration, its doctrines are so well considered and are set forth with such lucidity and force.

Yet while the reader's feelings are pleasureable, it must be confessed that they are (to use our author's terminology) occasionally of the pleasureable-restless type. But if the book at times stirs the spirit of opposition as well as of imitation, it is an indication of Professor Royce's power to preserve in the reader that happy balance of opposing forces which, as already expressed in his own words, is the basis of every higher form of mental activity. The book is an important contribution to psychology, and can be commended for its richness of contents and its grace of form.

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Philosophy in Poetry. E. HERSHEY SNEATH. New York, Scribners 1903. Pp. ix + 319.

The Mind of Tennyson. E. HERSHEY SNEATH. 2d ed. New York, Scribners, 1903. Pp. xii + 193.

In the first of these volumes Professor Sneath presents a study of Sir John Davies' philosophical poem 'Nosce teipsum.' In the second he gives an exposition of Tennyson's philosophical position. If Tennyson's is the better poetry, Davies' is the closer reasoning. The contrast between the doctrines of the two men is most striking. Tennyson represents the man who, familiar with modern science, still retains his belief in religion, but seldom attempts to establish his beliefs by argument. Davies, living in the Elizabethan period, presents the scholastic view of things and the scholastic method of establishing these views. He was poet, lawyer and statesman, finally reaching the position of Lord Chief Justice. In the poem here discussed, he presents in rhymed quatrains of heroic decasyllabic verse a 'complete philosophy of mind.' It is remarkably good metaphysical poetry and contains much good close reasoning. Its chief value is historical. "For the history of philosophy it is of great significance, as it enables the student to understand the psychology and philosophy which were current before the introduction of the philosophies of Descartes, on the one hand, and of Hobbes and Locke on the other." The nature of knowledge and of the soul furnish the main topics for discussion.

Professor Sneath has in a very thorough scholarly study presented the views of Davies and traced them to their sources in the writings of Calvin, Nemesius, Cicero and Aristotle. The entire poem is printed in the appendix.

The new edition of the *Mind of Tennyson* contains few changes. In this book again we have a very scholarly work. Tennyson's phil-

osophical development, his early orthodoxy, his period of doubt, his attempt to support his religious beliefs by reasoning, and his final adoption of a faith philosophy, all these are admirably presented with abundant citations from Tennyson's works. Tennyson's philosophical discussions are grouped under the problems of God, freedom and immortality.

Both these volumes are of interest and value to students of the history of philosophy and the history of poetry.

ADAM LEROY JONES.

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PSYCHOLOGY OF RELIGION.

The Contents of Religious Experience. JAMES H. LEUBA. *The Monist*, Vol. XI., No. 4, July, 1901.

Observations de psychologie religieuse. TH. FLOURNOY. *Archives de Psychologie*, II., 8, October, 1903.

Professor Leuba's article is one of the series of papers on the psychology of religion coming from time to time from his pen. The paper is, as the author states, a mere survey of the materials he had in hand, consisting of a number of autobiographical accounts of religious experience, "with the unpretentious purpose of gathering a few general impressions which may serve as a preparation for the more systematic investigation to come. It is, accordingly, little more than samples of the data collected, accompanied with a few comments." The fourteen religious autobiographies transcribed illustrate almost as many types of religiosity, and give one a glimpse of the varieties of religious experience.

The comments fall for the most part into two classes — the first pertaining to the relation of intellectual belief to religious life. "The frequent inconsistencies," writes Professor Leuba, "the unmeaning explanations, and the oft-recurring negative answers, indicate how little reflection is given to religion, how much it is a matter of uncontrolled impulse. * * * The supremacy of the fundamental life impulses over the directions of the intellect, of the unconscious over the conscious, affirms itself with uncontested significance in these records; not what is objectively real or what is logical, but that which ministers to the approved needs and desires is the 'religiously' true." After pointing out, in the documents he has collected, the influence that the desire or 'will to believe' often has over religious conviction, and the inclination to construct one's ideas of the Deity *according to one's own needs*, the author concludes: "Truth for the natural man, is

that which secures the result wanted; its criterion is affecto-motor efficiency. Whatever regard we have for objective truth and logical consistency is evidently due to the practical benefits derived from conforming our conduct to their requirements." The fact that these comments are abstracted from actual religious experience bars them from the realm of the commonplace. Indeed, the chief value of Professor Leuba's work is, that it is a serious effort to find out the *real* contents of the religious consciousness of our contemporaries, and thus to transform empirical opinion about religious life into scientific knowledge.

The other class of comments relate to the meaning or end of religious activity. We cannot do better than give in the author's own words what seems to him the chief philosophical conclusion of his paper.

"The end of religion is not the worship of God as some like to put it. * * * The fact is that when God, conjured up by the needs of the worshipper, appears before him, his hands stretch forth in request for power or mercy, not in adoration. And, preposterous as it may seem, it is yet true that he cares very little who God is, or even whether he is at all. * * * The truth of the matter may be put this way: *God is not known, he is not understood: He is used*—used a good deal and with an admirable disregard of logical consistency, sometimes as meat-purveyor, sometimes as moral support, sometimes as friend, sometimes as an object of love. If He proves himself useful, his right to remain in the service of man is thereby vindicated. The religious consciousness asks no more than that. Not God, but life, more life, a larger, richer, more satisfying life, is in last analysis the end of religion. The love of life at any and every level of development, or, to use another phraseology, the instinct for preservation and increase, is the religious impulse. It would appear, then, that there is at bottom no specifically 'religious' impulse; the preservation and increase of life is the moving impulse as well of religious as of secular activity. * * *

"How could men have to come to think that 'the vital element in all religions is the conviction that the existence of the world, with all it contains and all that surrounds it, is a mystery ever pressing for interpretation?' On the contrary, the mystery of the world is resolutely thrust aside by consciousness in so far as it is, and as long it remains, religious. * * * The pious soul may, and often does, leave its supplicating attitude to turn for a while to philosophy, but it then ceases to be religious and becomes philosophic. For a moment it yearns,

it desires, it supplicates, it wills; for another moment it is critical and asks whys and wherefores — then religious, now philosophic, in as close succession as you please. In the twinkling of an eye it passes from the one to the other attitude; they alternate but they cannot coexist. They differ just as much and in the same way as desiring differs from thinking, or willing from reasoning. Considered merely from its intellectual side, the religious attitude postulates, the other inquires."

In the *Observations de Psychologie religieuse* M. Flournoy has made a valuable contribution to the data available for the psychological study of religion. The paper consists of six religious autobiographies, with sundry remarks and explanations by the author relating to the various points touched upon in the different accounts. There is nothing in the experiences set forth that is striking or remarkable — one finds in the data merely the commonplace and normal experiences of commonplace and normal persons. Indeed M. Flournoy states at the outset that 'it is with ordinary and commonplace natures that psychology and its practical applications (pedagogy, etc.) are concerned primarily, in the endeavor to understand and guide these; and the analysis of extraordinary cases is of importance only as it leads to a more far-reaching knowledge of the ordinary human mind.'

"The accounts," says M. Flournoy, "are too disparate to admit of any general conclusions apart from those dealing with the relation of intellectual beliefs (dogma, theological conceptions, etc.) to the more deep-seated phenomena of the emotional and volitional order." Apart from the documents themselves, the chief interest of the paper centers in the comments which the author makes upon this relationship. He finds two extreme types that illustrate very clearly the differences that can exist between religious persons in respect to the rôle played by doctrinal belief. Between these extremes one finds an infinite diversity of intermediary positions.

"There are persons," M. Flournoy writes, "for whom a fixed and well-determined doctrinal system is felt to be a necessary condition, a *sine quo non* of religious life. * * * This type of individual gives the central place in his religion to a system of intellectual affirmations, swallowed whole through a faith in some external authority, and serving as the touch-stone, as the regulator, of all his moral and religious life. For these, religious evolution consists mainly in ridding themselves of the intellectual shell that surroundings and education have put upon them, in order to leave their immediate inner experience free to expand in whatever way it will." A mysterious

reality, inaccessible even when it is present to one, which falls under no intellectual category, not even that of personality, but a living reality that calls forth one's prayer and answers it, that stimulates one to acts of courage, that goes to the very root of one's being, the source of life and joy—this holds the central place in the life of these persons, and performs functions essential to them—one may almost say biological functions. On account of its value and vital importance to them, these persons do not hesitate to accept such experience as true. They find a purity and a transcendence in their religious life that satisfies their needs.

M. Flournoy likewise calls attention to the fact that the 'doubts' so often referred to by religious persons, are never doubts of an intellectual nature. "These have to do with one's inner state, with the question of one's own safety, not with the truth of dogma." The latter are not questioned in the least. Religious evolution and crises take place in the deep vital sphere of the affective and moral nature, not in the realm of dogmatic belief. This point—that religion concerns itself with life rather than with the logical accuracy of the intellectual beliefs—is made by Professor Leuba also, in the article reviewed above.

M. Flournoy emphasizes another point insisted on by Professor Leuba—namely, the demand on the part of the individual that his religion recognize and satisfy his needs. "It is a constant psychological phenomenon that the gaps, the inconsistencies, even the contradictions of a system are no obstacles to its acceptance by all those who find in that system the counterpart of their own religious experience, the echo of their feelings, and the satisfaction of their needs. It seems that just that quality, the response to the many vital needs of the individual, is the only essential of such a system, and in proportion as it possesses this, he lets pass the inevitable incoherence which is to be found in every attempt at metaphysical systematization, from that of the humblest to that of the most profound thinker."

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EXPERIMENTAL.

Studies in the Psychology and Physiology of Learning. EDGAR SWIFT. American Journal of Psychology, Vol. XIV., pp. 201-252.

In this doctor's thesis are recorded the results of an experimental study of learning under the three heads of acquisition of skill, acquisition of information, and getting of motor control.

I. *On Tossing and Catching of Balls.*—Two balls were kept going in the air by means of the right hand. The object was to see if this kind of learning would show a typical curve. Six subjects were tested, each having ten trials daily. Four of these were trained until their average number of catches per trial exceeded 100 for two successive days. The curves for all show a striking similarity.

The left hand was tested at the beginning and then again at the end of each day's period of work for several days. Two of the main results were especially interesting (1) the concavity of the right hand curves toward the vertical axes, indicating slow progress at first, followed by more rapid improvement, and (2) progress by jumps but no one particular plateau of considerable length. These characteristics do not agree with the Bryan and Harter curves found in the learning of telegraphy. The left hand curve resembled the right but its progress was much more rapid. The gain is ascribed partly to transference of method and partly to the direct effect of training on symmetrical portions of the nervous system. The subjects improved their methods of tossing and catching with no further conscious selection than general effort to succeed. Five monthly tests, made after the experiment closed, brought out a new gain in skill instead of a loss. The explanation offered by the author, that the mind grows to modes in which it is exercised and that this growth may continue after cessation of practice is not satisfactory. The experiment is, at any rate, not sufficient to prove it. It may possibly have been due to the fact that twenty-four hours was not the most favorable period of rest and that consequently the highest point of skill did not appear during the experiment.

II. *On Learning Short-Hand.*—This was selected because of its analogy with the experiments of Bryan and Harter—as likely to produce a similar curve. The writer, the only subject, studied for about ten weeks, an hour and a half a day. Daily tests were made. During the period of learning the symbols, the curve shows a rise like that in the telegraphic curve. As it was not found in the preceding experiment, the author concludes that it appears only when symbols of some kind are being learned, and that after that first spurt, the curve of learning is concave until the physiological limit is approached. Nothing like a plateau is found. Instead retardation and progress alternate. Automatization goes on through the whole process. Any continued arrest in progress is to be explained, the writer thinks, by emotional factors such as the painful drudgery and depressing monotony accompanying efforts which are not bringing forth appreciable

results. Unfavorable physical condition, variation of maximum effort, and overstrained attention affect the score as well as in the previous experiment.

III. *On the Origin and Control of the Reflex Wink.* — The control is considered first and with adult subjects. A wooden hammer striking against plate glass near the subject's face, furnished the stimulus. A long series of experiments brought out the following results. (1) The eye reflex is a complex reaction, the result of visual and auditory sensations and the final effect seems to be greater than the sum of the separate effects. (2) The reaction is reduced by the closing of the ears, by contraction of the muscles near the eyes, by attention on inhibition, or by distraction of the attention, this last having only temporary effects. (3) No effect is produced by moderate fatigue or by adding. (4) Training gained by the above muscular contraction improves the control when the attention is directed toward inhibition of the wink.

The experiments were then continued with two babies as subjects, the object being to investigate the origin of the reflex wink. Excessive sensitiveness to auditory stimuli is found to last until about the fiftieth day. The first response to the stimulus is a general organic one in which the eyes participate. About the sixtieth day, the wink becomes a distinct auditory reaction and other bodily responses cease. About the eightieth day the visual reflex begins and as it increases, the auditory decreases. Experiments made on four university students and a five-year-old boy show no essential difference in reaction after five years of age. The writer points out that the elements of reflex reaction are evidently given by heredity but their adaptation to ends has to be learned. He does not discuss why the wink, which is supposed to have teleological significance for the eye alone, appears first as an auditory response and only later as a visual reaction.

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The Influence of Accommodation and Convergence upon the Perception of Depth. J. W. BAIRD. *American Journal of Psychology*, 1903, XIV., 150-200.

This renewed attempt at settlement of the time-honored, vexatious, insistent problem of the criteria of tridimensional vision represents, so the writer tells us, almost four years of intermittent work. For our purpose the article may be considered as divided into two parts, historical and experimental.

The historical section, occupying one third of the space, gives a summary, partly critical, of earlier investigations and theoretical and experimental conclusions, from the nativistic, empirical and genetic standpoints. This summary is good reading, it is far less open to the charge of needless repetition characteristic of the latter part (especially pp. 173-177); it is the best available digest in English, and exhibits greater perspective than Arrer's, while not entering so completely into certain details. But it does not suffer from over-completeness; indeed it omits numerous references which directly contribute to the discussion of the problem. *E. g.*, to mention a few names (or references): Witasek (*Zeitsch.*, 1899—movement sensations purely hypothetical); Wundt (*Stud.*, 1898, 44—reversible illusions, offering specially favorable objective conditions, not referable to accommodation; the difference between planospective and perspective seeing not temporal nor contained in the processes themselves); Le Conte Stevens (*Am. Jour. Sci.*, 1881, 444—modification of depth by the pseudoscope is merely from change of tension in the rectus muscle, *i. e.*, variation of convergence, a conclusion really reached earlier by Brewster, *The Stereoscope*, 216); Loeb (*Archiv für die gesammte Physiologie*, 1897, 278—paralyzing the power of accommodation by atropin does not affect reversions); Hoppe (*Psych.-phys. Opt.*, 210—theory of muscular transposition). Experiments with lenses (*e. g.*, McDougall) and colors (*e. g.*, Thompson) also have bearings—the latter furnishing a strong argument, so it seems to me, in favor of the position the author finally reaches.

The statement that 'approximately adequate test' (s) have been made only by Wundt, Hillebrand, Arrer and Dixon shows a rather disparaging estimate of the labors of Hueck and Meyer. Judged by our standards of to-day their shortcomings are evident enough, precisely as ours will be to the investigator of the latter part of the century. Hueck and Meyer were pioneers in a difficult task! Yet they reached a conclusion we still accept. They did not isolate the factors, but while later experimentalists have striven with commendable zeal to do this, it is still doubtful, at least to me, if this has been accomplished with complete success.

The main burden of the experimental part is to prove that 'accommodation constitutes the essential criterion of depth in (the) monocular experiments.' The apparatus and the method employed for this purpose duplicate Hillebrand almost throughout. Dr. Baird carried through five groups of experiments with considerable detail, one of which consisted in the absolute estimation of distance, the results of

which justified him in rejecting the negative position of Wundt and Hering respecting this capacity in the condition of the test. His results also show that in starting the movement in the gradual method before exposure was made he has improved upon Hillebrand, although it is proper to observe that Dixon found that when the card was at rest it was reported to be moving. Apart from minor details, very valuable in themselves, it cannot be said that Baird contributes any new data or results. What the paper gives is a confirmation of substantially all the experimental results as such found in the three earlier investigations with substantially the same apparatus—by Hillebrand, Arrer and Dixon. This prompts me to remark that the limits of this method of procedure have already been reached; that future experimenters should not repeat it, but proceed along other, and improved lines.

I regard Dr. Baird's case in favor of the influence of accommodation as the strongest thus far offered, especially with respect to his theoretical arguments. Yet his own tables would force him to the admission, which he seems to make (p. 193), that its rôle is merely nominal as compared with convergence: the binocular estimations are often several times more accurate and less variable. They also show that the sensations from the relaxation of the ciliary muscle, for which he argues, are usually very weak compared with those from contraction. But, to take Baird's position, one might argue consistently with the results that to tighten the ciliary and loosen the suspensory ligament must yield stronger sensation data than to loosen the ciliary and tighten the ligament, owing to the operation of the former upon the choroid, which thus arouses larger irradiations; and that the heightened binocular accuracy comes from the 'range of accommodation.' But the experimental situation is not so simple.

To come to close quarters. The conclusion that is announced, 'that accommodation is the determining factor in monocular vision,' be it true or false, really oversteps the experimental data, and rests on certain premises—in the opinion of the writer. (1) It is assumed that the accommodation factor was adequately isolated in the monocular series. The results stand or fall on the validity of this premise. There are reasons for doubting it. Granted that the connection between accommodation and convergence is loose; perfect isolation demands that there be none. But Dixon's special tests rather show that the connection is too close to be ignored. He was forced to modify his opinion, or at least to suspend judgment. Baird's results would be consistent with this view; for the greater inaccuracy of monocular

estimations would be due to impaired efficiency of convergence when one eye is closed, and the introspections, almost throughout, indicate no difference. So that (2) Baird's introspections are scarcely adequate to the conclusion. They are for all except two subjects of the 'immediate character,' with no conscious groundwork. But to make appeal to a judgment of immediacy, incapable of *self-analysis*, is to argue on the basis of the unknown because the known is not immediately apparent. It is the nature of the elements in fusions to drop from consciousness. Thus while no other factor may have been consciously recognized this is not tantamount to saying that none other may have been operative, especially if the experimental conditions did not rigorously exclude the latter possibility. The introspections themselves make us suspicious. Baird's subject *B* 'inferred nearness from distinctness' (p. 185). This case may be considered quite special, because of normal hyper-inertia of accommodation. But this seems to represent the type for Dixon's observers. His single exception (*C*), on which he largely bases his argument, depends on a time difference, which he *infers* depends on ease of accommodation; while Baird's striking exception (*G*) depends on strain sensations, also inferentially connected with the ciliary muscle. That they may arise from convergence strain may be argued on the basis of one of Dixon's subjects whose ciliary muscle was paralyzed, but who could, notwithstanding, judge distance correctly in the conditions of the test. Baird's introspections rather make against his acceptance of nativism as respects relative binocular localizations (p. 198), while rejecting it for monocular vision. In his results both are equally 'nativistic.' In any event, they only warrant a rejection of nativism of product, of the Kantian schemata, of an absolutely agenetic, fixed, conceptual space, empty, finished, all-containing and all-accommodating to all phenomena. So that we may still hold to a genetic nativism, a nativism of process, function or modes. Consciousness responds 'nativistically' in a certain way to its stimuli; it functions space-wise all along, but the little fragments of space experience pass through successive stages of modification and elaboration.

What, therefore, as it seems to me, is imperatively necessary to validate (or invalidate) the conclusion as an indubitable experimental 'result' is (a) experiments on persons whose function of accommodation is suspended, entirely if possible; (b) practice experiments on the non-accommodating and accommodating eye, differences between which should be significant; (c) monocular experiments apart from binocular, to prevent transference of effects; (d) fixation points

minimizing to the utmost blurring and dispersion effects. Probably small points of incandescent wires, varying in size and intensity with the distance at which they are placed, so as to be like the standard in both respects, would fulfill the requirements. Any difference in the dispersion images from these would thus seem to be wholly due to differences of distance; and the eye would turn reflexly to the small, bright stimulus, thus expediting the process of accommodation, for the accommodating eye at least. I venture to raise another objection to the Hillebrand apparatus. The eye localizes a black patch at a greater distance than a white. Suppose this should involve a difference in accommodation; to fixate the line determined by the overlapping of the white and black edges would, then, seem objectionable. How far valid this objection may be I cannot say.

A minor discrepancy may be noted. The rate of movement is given on p. 174 at 10 cm. in 7^s; on p. 177 at 7 cm. in 10^s.

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Attention Waves as a Means of Measuring Fatigue. W. B. PILLSBURY. *American Journal of Psychology*, 1903, XIV., 277-288.

This adds another to the numerous pieces of illuminating work which have recently appeared from the Michigan laboratory. Professor Pillsbury now addresses himself to the task of determining whether attention waves exhibit diurnal variations in length analogous to the physiological cycles, and whether variations in the attention cannot be employed as a valid register of the progress of the stages of fatigue in the day's work, from morning to night.

The results indicated an affirmative answer to the first question, which corroborates the earlier conclusions obtained by other investigators. A longer total fluctuation is correlated with maximal attention efficiency. The important supposition is made, that the ratio of attention efficiency to inefficiency is dependent on the efficiency of the cortical cells, while the duration of the total wave is correlated with the Traube-Hering fluctuation.

The answer to the second question — of more interest to the reviewer — is affirmative also, and suggests practical considerations. Professor Pillsbury considers that the results — given individually for the six subjects experimented upon at four stages during the day — indicate four types of workers: (1) Evening workers, (2) morning, (3) those with two periods of maximal efficiency, (4) those entirely irregular throughout the day and from day to day. The evidence, so

far as it goes, shows that the efficiency in the evening is greatly increased by a reduction of morning work, *i. e.*, work earlier in the day, whether by lessening the quantity or substituting an easier type of work; that, within the period of observation, ten to fifteen minutes, the familiar 'warming-up' or 'second-wind' phenomena are not so evident, if at all, in the evening records, or, in other words, that in the stage of general fatigue the exhaustion is rapid, and shows little tendency to recovery. Pillsbury's short periods perhaps minimize this tendency. The organism, when pressed to the utmost, as we know from experience, manifests a remarkable ability to take a firm brace. Sometimes when we are most tired, after a long siege of laborious endeavor, we apparently attend most easily or spontaneously.

Very striking is the increase in attention efficiency with these fluctuations caused by an hour's sleep during the afternoon. The evening efficiency is nearly equal to the morning efficiency, while ordinarily there is a loss of from forty per cent. to sixty per cent., as seen in the other tables. This strongly confirms, we may note, the pedagogical position that periods of relaxation should be multiplied, and shortened, to insure maximal efficiency. The increase in the efficiency-time with the Masson disc is so striking that a prolonged systematic experiment on this point alone is urgently needed. We assume, of course, that the visibility-periods are trustworthy indices of attention efficiency; but a source of error is the progressively growing tendency to subjectively rhythmize the fluctuations. This one record may be an extreme case. No doubt types would be discovered here, especially as between the trained, inured adult worker (*e. g.*, the author's subject, *P*, a disciplined adult) and the young, undisciplined adolescent, a distinction resting largely on differences in neural plasticity. Our pedagogy is of only slight practical moment until it has correlated the fatigue curves with the individual's genetic stages and with individual types, for, so far forth, we may define the problem of pedagogy to be this: to legislate rules on the basis of which the maximum result of discipline may be obtained with minimal fatigue. But the fatigue limit is not a point, but a zone, an elastic range always short of pathological fatigue. Professor Pillsbury's contribution suggests a valuable method of attacking a wide problem.

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BOOKS RECEIVED FROM JANUARY 7 TO FEBRUARY 7.

- Die Gesellschaft.* E. V. ZENKER. Berlin: Reimer, 1899-1903. Bd. I., pp. xii + 232. Bd. II., pp. ix + 134. M. 5 and M. 3. [The first volume has the subtitle '*natürliche Entwicklungsgeschichte der Gesellschaft*'; the second, '*die sociologische Theorie*.' In the second the Preface refutes the charge of 'eclecticism' brought by critics of the first, and describes the author's point of view as one rather of 'synthesis.']
- Wörterbuch der philosophischen Grundbegriffe.* F. KIRCHNER. Fourth ed., revised by C. MICHAELIS. Leipzig, Dürr'schen Buchhandlung. 1903. Pp. vi + 587. M. 5.60.
- L'Origine dei fenomeni psichici.* G. SERGI, 2 ed. Turin, Bocca, 1904. Pp. x + 367. [Two new chapters are added to this well-known book, one on 'Biological Heredity' (ix), and the other on 'The Basis of Sociology' (App. to Chap. XVI.). The revisions include the insertion of certain illustrative figures. Recent work does not seem, however, to be taken account of: there are no allusions to the books of L. Morgan, James, Thorndike, Mills, K. Groos, Hobhouse, etc.]
- Philosophie als Denken der Welt gemess dem Princip des kleinsten Kraftmasses.* RICH. AVENARIUS. 2d Auf. Berlin, Guttentag, 1903. Pp. 85. M. 1.50. [This is an unaltered reprint of the first edition, described further as 'Prolegomena zu einer Kritik der reinen Erfahrung.']
- Die Grundlehren der Psychologie vom Standpunkte des Voluntarismus.* N. LOSSKIJ. German by C. KLENKER. Leipzig, Barth, 1904. Pp. vi + 221. M. 6. [By a Russian author, Privatdocent in the University of St. Petersburg.]
- Esquisse d'une Éducation de la mémoire.* J. J. VAN BIERVLIET. Gand, Siffer. (No date.) Pp. 126. 2 fr.
- Educational Psychology.* E. L. THORNDIKE. New York, Lemcke and Buechner, 1904. Pp. vii + 177. [Described in the preface in these terms: "The book attempts to apply to a number of educational problems the methods of exact science. I have therefore paid no attention to speculative opinions and very little atten-

tion to the conclusions of students who present data in so rough and incomplete a form that quantitative treatment is impossible.]

Psychology and Common Life. F. S. HOFFMANN. New York, Putnam, 1903. Pp. viii + 286. ["The object," says the preface, "is to select the most important facts * * * of psychical research, describe them * * * and point out their bearing upon the interests of everyday life." Psychic research is broadly understood; but still the use of the term 'psychology' without qualification in the title seems misleading.]

Sociology, the Science of Human Society. J. H. W. STUCKENBERG. New York and London, Putnam, 1903. 2 vols. Pp. xi + 408 and vi + 339. [An elaborate treatise by the late Dr. Stuckenberg, following up his *Introduction to the Study of Sociology*.]

The Nature of Goodness. G. H. PALMER. Boston and New York, Houghton, Mifflin & Co., 1903. Pp. xi + 247. \$1.10 net.

Ultimate Conceptions of Faith. G. A. GORDON. Boston and New York, 1903. Pp. xix + 399. \$1.30 net.

Journal of Addresses and Proceedings of the National Educational Association. Boston, 1903. University of Chicago Press, 1903. Pp. 1080. [Contains the usual variety of papers and discussions arranged by departments. Those on 'child study' and 'special education' (especially defectives), will interest psychologists. Separately bound comes also the *Year Book and List of Active Members*.]

Philosophie des sciences sociales. I. Objet des sciences sociales. RENÉ WORMS. Bibl. social internationale, No. XXVII. Paris, Giard et Brière, 1903. Pp. 230. 6 fr.

Transitional Eras in Thought, with Special Reference to the Present Age. A. C. ARMSTRONG. New York and London, Macmillans, 1904. Pp. xi + 347.

Report of the Commissioner of Education, 1902. Vol. II. Washington Government Printing Office, 1903. Pp. vii and 1177-2447. [Contains, besides a great variety of domestic topics, important reports on education in Porto Rico and Alaska.]

Travail et Plaisir. Nouvelles Études expérimentales de psychomécanique (avec 200 figs. dans le texte). CH. FÉRÉ. Paris, Alcan, 1904. Pp. 476 (large 8vo.)

NOTES AND NEWS.

A NEW *Journal of Experimental Zoölogy* is announced, to be edited by a board of authorities representing different universities; managing editor, R. G. Harrison, Johns Hopkins University. It will appear four times a year at irregular intervals. In scope it is designed to cover experimental morphology and the problems of general biology. Address: Managing Editor, *Journal Experimental Zoölogy*, Wolfe and Monument Sts., Baltimore, Md. \$5 and \$5.50 (foreign) net per vol.

WE note the appearing of the first number (January 7, 1904) of the *Journal of Philosophy, Psychology and Scientific Methods*, published by the *Science Press* (Garrison, N. Y., and Lancaster, Pa.),¹ which publishes also the *Popular Science Monthly*. The editor is not explicitly named, but editorial communications are to be addressed to Professor F. J. E. Woodbridge, Columbia University. So far as the new journal does not in its scope occupy ground already covered by existing publications, nor duplicate the work of the contributors to other journals, it is to be welcomed as an ally in our common cause. It would seem, however, that in its reviewing department it is likely in a measure to repeat what is fully done by *Mind*, the *Philosophical Review*, and this REVIEW, and also what is in part done by the *Internat. Journal of Ethics* and the *Monist*. In external appearance it is somewhat like this BULLETIN, which continues the page, paper, etc., so long familiar to the readers of the PSYCHOLOGICAL REVIEW.

THE fruitful activity of the French psychologists and philosophers is indicated by the new serial publications now coming from Paris. Besides the *Bulletin de la Société française de Philosophie*, we have the *Bulletin de l'Institut général psychologique* (six issues a year; just completing its third volume), the *Bulletin de la Société libre pour l'Étude psychologique de l'Enfant*, and most important of all the *Journal de Psychologie* advertised in this issue of the BULLETIN. Among the collaborators we find the most distinguished names: for example, M. Pierre Janet is editor-in-chief of the *Journal*; a committee (d' Arsonval, Ribot, Boutroux, etc.) of the *Bulletin de l'Institut*

¹The 'Science Press' is, or was shortly ago, Professor J. McK. Cattell, of Columbia University.

général; M. Léon, editor of the well-established *Revue de Métaph. et de Morale*, is also sponsor for the *Bulletin de la Société française*; while M. Binet, who publishes the valuable *Année psychologique*, is one of the editorial commission of the *Bulletin* of the Child Study Society. All of these publications are valuable. We publish in our next issue an account of the *Vocabulaire* appearing in the Philosophical Society's *Bulletin*.

In the *Bulletin* of the *Institute général* (Vol. III, 1903), we note many important papers presented to the various sections (it will be remembered that the Institute is made up of sections each devoted to a branch of psychology—zoölogical, social, experimental, etc.); Among them, 'The Artificial Speech of Birds' and 'Reasoning by Cats' (de Vevéy, No. 1), 'Inter-Psychologie' (Tarde, No. 2), 'Character' (Malapert, No. 3), discussions on 'Imitation in Birds,' 'Intelligence of Cats, etc.' (Giard, Hachet-Souplet, No. 3), 'Hypnagogic Images and Entoptic Phenomena,' etc. (Delage, No. 3), 'Space Perception' (Rousseau, No. 3), 'Methods and Apparatus for the Measure of Sensations of Relation' (Toulouse and Vaschide, No. 3), 'Alcoholism' (a symposium, No. 4), 'Action of Electricity on Living Matter' (d'Arsonval, No. 5), 'Intelligence in Man and Animals' (de Vevey, No. 5), 'Sense of Direction and Automatism' (Sollier, No. 5), and others.¹ The literature of psychology is analysed and reported promptly in the successive numbers. The Institute is to be congratulated on its important work of synthesis in psychology. It is to be regretted that the two American university psychologists who were enrolled in the list of patrons felt obliged to decline (one of them, at least, on account of the unprofessional character of some of the other American representatives: the names of those now acting are Morton Prince, Elmer Gates, James H. Gore, May Wright Sewall, Van der Naillen).

We note the rapid appearance of the successive volumes of *The New International Encyclopedia* (Vols. I. to XIV., Dodd, Mead & Co.). The philosophy and psychology are in the hands respectively of Professors McGilvary and Titchener of Cornell University—sufficient guarantee of adequate treatment. The volumes have many new and interesting features. Full notice of the articles falling within the scope of the REVIEW is reserved until the work is completed.

Professor Mark Baldwin's *Story of the Mind* is being translated into Spanish by Professor Julian Basteiro of the *Instituto de Toledo*.

¹ All in Volume III. The contents of Vol. III., No. 6, issued in January, 1904, will be found in the section devoted to the Reviews.

WE learn that Professor James Ward, of Cambridge, has been asked to give a course of lectures in the University of California Summer Session, this year. His coming would seem to present an opportunity for securing him at some of the other Universities as well, and additional invitations to lecture, if sent at once, might indeed make it possible for him to accept the California appointment. At any rate he may expect a most cordial welcome on this side the water.

THE following items are taken from the public prints:

PROFESSOR G. S. FULLERTON, of the University of Pennsylvania, has been named Professor of Philosophy in Columbia University, New York.

PROFESSOR D. IRONS returns to Bryn Mawr College this spring after a leave of absence.

DR. MINER and Dr. Messenger, both of Columbia University, New York, have become respectively Instructor in Illinois University and Professor in the Winona (Minn.) High School.

DR. J. H. BAIR has been appointed professor of psychology in the University of Colorado (succeeding the late Professor Allin).

PROFESSOR ROYCE, of Harvard, is to lecture on philosophy at Columbia University this spring. Professor Ormond of Princeton has finished his course of lectures in the same series.

DR. WILLIAM OSLER has been appointed Ingersoll lecturer at Harvard for this year. He will lecture in May on 'Science and Immortality.'

DR. JACOB COOPER, Professor of Philosophy in Rutgers College, died on January 31.

THE local committee of the Geissen Congress of Experimental Psychology, meeting April 18, are Professors Groos, Siebeck, and Sommer, any one of whom may be addressed at Geissen.

CONTENTS OF THE JANUARY MAGAZINES.¹

PSYCHOLOGICAL REVIEW, XI., 1. The Participation of the Eye Movements in the Visual Perception of Motion: *Raymond Dodge*. An Inquiry into the Nature of Hallucination, I.: *Boris Sidis*. The Limits of Pragmatism: *J. Mark Baldwin*. The Sexual Element in Sensibility: *W. I. Thomas*. Dr. Morton Prince and Panpsychism: *C. A. Strong*.

PSYCHOLOGICAL BULLETIN, I., 1. The Chicago School: *William James*. Janet's Obsessions et Psychasthénie: *H. N. Gardiner*. Ladd's Philosophy of Conduct: *S. E. Mezes*. Stratton's Experimental Psychology: *J. R. Angell*. Philosophical. *J. M. B.* Notes and News. Books received.

PHILOSOPHICAL REVIEW, XIII., 1. Aristotle's Posterior Analytics: *John Watson*. The Reality of the Finite in Spinoza's System: *Eliza Ritchie*. Rationality and Belief: *A. K. Rogers*. Review of Books: Haldane's *The Pathway to Reality*: *William Caldwell*. Baldwin's *Dictionary of Philosophy and Psychology*: *W. A. Hammond*. Cresson's *La morale de la raison théorique*: *George S. Patton*. Busse's *Geist und Körper*: *W. B. Pillsbury*. Everett's *The Psychological Basis of Religious Faith*: *W. G. Everett*. Summaries of Articles. Notices of New Books. Notes.

MONIST, XIV., 2. Primitive Rome: *G. Sergi*. Ants and some other Insects (concluded): *August Forel*. The Still Small Voice: *Editor*. A Buddhist Genesis: *Albert J. Edmunds*. The Higher Criticism: *George W. Gilmore*. The First Buddhist Council (with prefatory note by *Albert J. Edmunds*): *Teitaro Suzuki*. Literary Correspondence. France. *Lucien Arréat*. Criticisms and Discussions: Physics and Metaphysics: *Paul R. Shipman*. Book Reviews and Notes.

INTERNATIONAL JOURNAL OF ETHICS, XIV., 2. The True Democratic Ideal: *W. Jethro Brown*. Relativity and Finality in Ethics: *Thomas C. Hall*. The Toleration of Error: *Eliza Ritchie*. Proverbial Morality: *Robert A. Duff*. Crime in England: *Samuel J. Barrows*. The Cynics: *John MacCunn*. The Individualism of

¹It is intended that this section, coming at the end, shall roll out like a continuous sausage, to be broken off at any link—always 'continued in our next.'—Ed.

Marcus Aurelius: *W. A. Watt*. The Spring of Salvation: *H. B. Alexander*. Discussion: Remarks on Professor Leuba's Criticisms: *James H. Hyslop*. Rejoinder to Professor Hyslop: *James H. Leuba*. Book Reviews: Spinoza's Political and Ethical Philosophy: *Robert A. Duff*. Dissertations on Leading Philosophical Topics: *Alexander Bain*. The Psychological Elements of Religious Faith: *Charles Carroll Everett*. La Religione Morale dell' Umanita: *Giovanni Cesca*. Il Pentimento e la Morale Ascetica: *Zino Zini*. Social Origins and Primal Law: *Andrew Lang* and *J. J. Atkinson*. Life and Labor of the People in London—Religious and Social Influences: *Charles Booth*. The Pathway to Reality: *R. B. Haldane*. Life in Mind and Conduct: *Henry Maudsley*. A History of the Problems of Philosophy: *Paul Janet* and *Gabriel Séailles*. Man and the Divine Order: *Horatio W. Dresser*.

JOURNAL OF NERVOUS AND MENTAL DISEASE, 31, 1. On Contrary Actions: *A. Pick*. A Case of Aphasia with loss of Memory of Nouns (Sensory Anomia) with Autopsy: *Charles L. Dana* and *Joseph Fraenkel*. Bony Sensibility: *Philip Coombs Knapp*. Optic Neuritis of Unknown Origin: *Howell T. Pershing*. Society Proceedings. Book Reviews. News and Notes.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNES-ORGANE, XXXIII., 6. Die Empfindlichkeit des Ohres: *H. Zwaardemaker*. Zur Psychophysiologie der Mundhöhle nebs. Beobachtungen über Funktionen des Tast- und Schmerzapparatus, etc.: *F. Kiesow*. Zur Frage nach der Fortpflanzungsgeschwindigkeit der Erregung im Sensiblen Nerven des Menschen: *F. Kiesow*. Ein Beitrag zur Frage nach den Reaktionszeiten der Geschmacksempfindungen: *F. Kiesow*. Literaturbericht.

ARCHIV FÜR DIE GESAMTE PSYCHOLOGIE, II., 2, 3. Untersuchungen über den Einfluss der Geschwindigkeit des lauten Lesens auf das Erlernen und Behalten von sinnlosen und sinnvollen Stoffen: *Robert Morris Ogden*. Zur Psychologie des Lesens bei Kindern und Erwachsenen: *Oskar Messmer*. Versuch einer Analyse der Scham: *Richard Hohenemser*. Literaturbericht.

REVUE DE PHILOSOPHIE, IV., 1. La Science et l'Esprit scientifique: *Georges Michelet*. Fénelon métaphysicien. Oeuvres inédites. I. Première rédaction de la troisième lettre sur divers sujets de métaphysique et de religion: *Eugène Griselle*. Ve Congrès de l'Institut international de Sociologie: *Edouard Gailleux*. Analyses et Comptes rendus. Périodiques. Bulletin de l'enseignement philosophique. Fiches bibliographiques.

